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Audit Report

OFFICE OF THE INSPECTOR GENERAL

TRANSITION OF ARMY MISSILE ACQUISITION PROGRAMS FROM PROGRAM MANAGEMENT OFFICES TO COMMODITY COMMANDS

Report No. 97-197

July 28, 1997

Department of Defense

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INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

July 28, 1997

MEMORANDUM FOR AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Audit Report on Transition of Army Missile Acquisition Programs From Program Management Offices to Commodity Commands (Report No. 97-197)

We are providing this final audit report for your information and use. This is the first in a series of audit reports resulting from our review of the transition of missile acquisition programs from program management offices to commodity commands. We considered comments on the draft of this report in preparing this final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional response is necessary.

We appreciate the courtesies extended to the audit staff. Questions on the audit should be directed to Mr. John E. Meling at (703) 604-9091 (DSN 664-9091) or Mr. Brian M. Flynn at (703) 604-9051 (DSN 664-9051). See Appendix D for the report distribution. Audit team members are listed inside the back cover.

David K. Steensma

David K. Steensma
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General, DoD

Report No. 97-197 July 28, 1997
(Project No. 6AE-5052.00)

Transition of Army Missile Acquisition Programs From Program Management Offices to Commodity Commands

Executive Summary

Introduction. This report on the transition of Army missile acquisition programs is the first in a series of reports. Subsequent reports will be issued for the transition of Navy and Air Force missile acquisition programs. In part, the Army will accomplish severe cuts in its staff levels planned for FY 1998 by transitioning the responsibility for management of weapon systems from program management offices to commodity commands. Reductions in weapon system management staff levels are based on the premise that weapon systems that transition from their acquisition phase with program management offices to their sustainment phase with commodity commands require less intensive management and, therefore, less staff. The Army generally cuts program management staffing in half when programs transition to commodity commands. To assist in meeting planned Army-wide staff cuts for FY 1998, the Army is planning to transition as many as 200 weapon systems to commodity commands. The unusually large number of systems to be transitioned was the reason for this audit.

Audit Objectives. The primary audit objective was to assess whether program management offices were transferring adequate funds and other resources to Military Department commodity commands for missile acquisition programs transitioning from program management offices. We also reviewed implementation of management controls applicable to transition management.

Audit Results. The Army, in general, effectively planned and managed the transition of missile acquisition programs from program management offices to the Army Missile Command. However, the Army Chief of Staff did not provide the Army Missile Command with sufficient Operation and Maintenance funds to correct deficiencies in missiles and related equipment transitioning to the Army Missile Command from program management offices and to sustain missiles and related equipment that have transitioned to it. As a result, the Army Missile Command was not able to bring up to the minimum levels of readiness missiles and related equipment for all Force Package 2 units, some of which could be expected to deploy within 24 hours (Finding A).

Funding problems associated with sustaining missiles and supporting equipment were exacerbated by the fact that users were not always receiving credits for depot-level repairable items returned to the supply system. Based on data in the materiel returns data base, we estimate that users are losing from $1.1 million to $63.9 million in credits, depending on whether the items were serviceable or unserviceable (Finding B).

Management controls were adequate in that we identified no material management control weaknesses applicable to our primary audit objective.

Summary of Recommendations. We recommend provision of sufficient funding to maintain the readiness of equipment as prescribed in Army guidance for the sustainment of fielded equipment. We recommend establishment of a training program for users on the proper preparation of depot-level repairable turn-in documents and the timely shipment of items to the wholesale supply organization to obtain credits for returned items.

Management Comments. The Army agreed to implement corrective actions in response to the report recommendations.

Audit Response. We consider the management comments to be fully responsive and commend the Army for its responsive actions. We revised the findings as appropriate based on the clarifying comments of the Army. A complete discussion of Army comments to the draft report is in Part II. The full text of the Army comments is in Part III.

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Part I - Audit Results

Audit Background

DoD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," March 15, 1996, states that acquisition program responsibilities for programs not assigned to a program executive officer must be assigned to a commander of a systems, logistics, or materiel command. The regulation further states that to transition from a program executive officer to a commander of a systems, logistics, or materiel command, a program must:

- o have achieved Initial Operating Capability;
- o be in full-rate production; and
- o be logistically supportable as planned.

To facilitate the transition of acquisition program responsibilities, Department of the Army Pamphlet 70-3, "Army Acquisition Procedures," February 28, 1995, requires that the program management office develop a transition plan and that the gaining functional manager and the program Milestone Decision Authority approve the transition plan.

In part, the Army will accomplish severe cuts in Army staff levels planned for FY 1998 by transitioning the responsibility for management of weapon systems from program management offices to commodity commands. Reductions in weapon system management staff levels are based on the premise that weapon systems that transition from their acquisition phase with program management offices to their sustainment phase with commodity commands require less intensive management. The Army generally cuts program management staffing in half when programs transition to commodity commands.

To assist in meeting planned Army-wide staff cuts for FY 1998, the Army is planning to transition as many as 200 weapon systems to its five commodity commands. Although decisions have not yet been made as to how many and which missile systems will transition to the Army Missile Command (Missile Command), currently only about one missile system a year transitions to the Missile Command.

Audit Objectives

The primary audit objective was to assess whether program management offices were transferring adequate funds and other resources to Military Department commodity commands for missile acquisition programs transitioning from program management offices. We also reviewed implementation of

management controls applicable to transition management. In Appendix A, we discuss the scope and methodology used to accomplish the objective, as well as organizations and individuals visited or contacted, management controls, and prior audit coverage.

Transitions Generally Well Managed

Program management offices and the Missile Command generally managed the transition of missile systems and supporting equipment in an effective manner. Although the Army could have initiated planning for transitions sooner, it prepared transition plans for each of the eight missile system that we reviewed in the audit. The transition plans served as a contract between the program management offices and the Missile Command for each transition. The transition plans described management objectives, outlined responsibilities, and specified detailed actions to effect an orderly transition of the functions and responsibilities of the program management office to the Missile Command. The transition plans also documented the program status, management structure needed to manage the program, contract status, funding availability, personnel to transition with the system, program milestone schedule, and other agreements and commitments related to the transition. However, the Army was not providing sufficient Operation and Maintenance funds to fully sustain missiles and related equipment that have transitioned. Further, the funding problems associated with sustaining equipment were exacerbated by the fact that users were not always receiving credits for depot-level repairable items returned to the supply system.

Finding A. Availability of Funds to Sustain Army Missile Systems

The Army Chief of Staff did not provide the Missile Command with sufficient Operation and Maintenance funds to correct known deficiencies in missiles and related equipment transitioning to the Missile Command from program management offices and to sustain missiles and related equipment that have transitioned to it. The Army did not provide sufficient funds because:

o the Army reduced Operation and Maintenance funding as a result of the reductions in appropriations in both actual and constant dollar terms,

o the Army commodity commands had to compete for the sustainment portion of the available Army Operation and Maintenance funding within the appropriation, and

o program managers did not budget sufficient funds to correct known system deficiencies.

As a result, the Missile Command was able to bring up to minimum levels of readiness missiles and related equipment only for those Army units designated first to fight and expected to deploy within 24 hours. The Army had insufficient funding to bring up to the minimum levels of readiness missiles and related equipment for other units, some of which may need to deploy within 24 hours, or units that may need to deploy within 30 to 90 days.

Sustainment Policy

The ability of Army forces to rapidly deploy anywhere in the world and immediately conduct combat operations is a national imperative. To that end, equally imperative is that the equipment for those forces be made available and maintained in a commensurate manner.

The Army must deploy its forces in echelons in that movement abroad is constrained by the strategic lift capability of our nation and its allies. Accordingly, the required readiness state of specified Army units is in large measure dictated by the interval of time planned between notification to deploy and actual deployment. During those varying intervals of time, the Army must take concerted actions to bring units to required levels of personnel strength, training proficiency, and equipment availability and readiness.

A critical factor in the overall sustainment strategy of the Army is a capability in the industrial sector to fully support the large, rapid surges of effort necessary

for mobilization. The Army cannot create infrastructure nor train personnel overnight. Further, Army contractual instruments needed to obtain industrial support require at best 10 to 14 days to consummate.

Therefore, Army acquisition program responsibilities for missiles are not only to keep the day-to-day sustainment of missiles at prescribed levels, but also to maintain an industrial base capable of sustaining mobilization. The industrial base is essential to mobilization and is required for the continued effectiveness of deployed systems.

Depot-Level Maintenance. Depot-level maintenance is the level of maintenance performed on material requiring major overhaul or a complete rebuild of parts, assemblies, subassemblies, and end items, including parts modification, testing, and reclamation as required. Depot-level maintenance supports organizational and intermediate maintenance organizations by more extensive shop facilities and personnel of higher technical skill than normally available at lower levels of maintenance.

Department of the Army Master Priority List. The Department of the Army Master Priority List (Master Priority List) is the standing order of precedence list used to guide the distribution of Army personnel and equipment resources. The order of precedence in the Master Priority List refers to the order in which the Army allocates and distributes equipment and personnel resources among claimants during peacetime. The Army publishes the Master Priority List twice a year. In areas where significant shortages exist, the intent of the Master Priority List is to place resources in areas that have the greatest risk or in areas that have the least flexibility or time to correct the shortage in the event of a crisis.

The Master Priority List implements the Department of Defense "First to Fight, First Resourced" policy. The Master Priority List ranks deployable units based on their strategic priority or their projected deployment sequence. Units with the highest priority are categorized as Force Package 1 units. Some of the units could be expected to deploy within 24 hours. Force Package 2 units are those of less priority, but some of the units are also expected to deploy within 24 hours. Force package 3 units are expected to deploy after 30 days, and Force Package 4 units are expected to deploy after 90 days. The Deputy Chief of Staff of the Army for Operations and Plans approves the Master Priority List.

Army prioritization guidance for sustainment of fielded equipment states that in general, Force Package 1 through 3 units are required to have 90 percent of their equipment in a ready state. However, because of the funding shortfalls previously noted, the Missile Command has only been provided with sufficient funding to support Force Package 1 units at the required readiness level.

Operation and Maintenance Funding

The Army Chief of Staff did not provide the Missile Command with sufficient Operation and Maintenance funds:

- to correct known performance deficiencies of transitioning equipment and
- to sustain missiles and related equipment.

Missile Command requirements for depot-level maintenance were underfunded from 18 to 85 percent for FYs 1996 through 2003. Part of the underfunding is a result of missile systems transitioning to the Missile Command with known deficiencies that were not funded; however, the underfunding is also the result of the inability of the Army Chief of Staff to provide the Missile Command with sufficient funds to sustain all the missile systems for which it is responsible. Table 1 shows by fiscal year the funding requirements and the amount and percent of unfunded depot-level maintenance requirements.

Table 1. Unfunded Missile Depot-Level Maintenance Requirements

FY	Requirement (millions)	Unfunded Amount (millions)	Percent Unfunded
1996	$119,430	$37,676	32
1997	142,121	74,625	53
1998	144,146	104,592	73
1999	149,494	61,966	41
2000	138,274	25,478	18
2001	141,003	119,721	85
2002	156,836	73,329	47
2003	162,870	97,254	60

Unfunded Requirements

The unfunded depot-level missile maintenance requirements were caused by reduced Army appropriations levels and competition for the sustainment portion of the available appropriations between commodity commands. The Missile Command was at a disadvantage in the competition because of congressional direction that 80 percent of the depot-level requirements of aircraft, combat vehicles, ships, ground communications, and electronic equipment be funded with the limited funds that were available. Also, program managers for missile systems scheduled to be transitioned to the Missile Command budgeted insufficient funds to correct known system deficiencies.

Reductions in Budgets and Funding. As shown in Table 2, the total DoD budget decreases from FYs 1995 to 1998, and although it is projected to exceed FY 1995 levels in FY 1999, when the 1995 dollars are adjusted for only a 2-percent inflation rate, projected DoD budgets will never equal the buying power of the FY 1995 appropriation. In addition, even though nominal dollar increases are planned in the total DoD appropriation, the Operation and Maintenance portion of the budget decreases until FY 1999. But, more importantly, the depot maintenance portion of the Operation and Maintenance funds decreases through FY 1999 and funding after that increases and then decreases.

Table 2. Appropriation and Operation and Maintenance Funds

FY	Total DoD Appropriation or Budget (millions)	1995 Appropriation Adjusted for 2-Percent Inflation (millions)	Army Operation and Maintenance Funds (millions)	Depot Maintenance Funds (millions)
1995	$255,662	$255,662	$18,659	$972
1996	254,919	260,775	20,246	731
1997	251,648	265,991	17,473	700
1998	252,231	271,310	17,215	637
1999	257,195	276,737	16,891	622
2000	263,479	282,271	17,157	721
2001	270,265	287,917	17,340	626
2002	278,209	293,675	17,890	740
2003	285,349	299,549	18,297	665

Competition for Available Funding. As funds available for depot maintenance become scarce, competition for the limited funds increases.

Congressional Language. Funds for missiles and associated equipment are at a disadvantage in the competition for available Operation and Maintenance funds because of language in the House of Representatives Conference Report on the DoD Appropriation for FY 1995. The Conference Report states that the Services should allocate funding for depot maintenance programs requested in annual budget submission at levels ". . . equal to or greater than 80 percent of the annual requirements for airframes and aircraft engines, combat vehicles, ships, and ground communications and electronic equipment."

Because the language requires funding of 80 percent of the needs of airframes and aircraft engines, combat vehicles, ships, ground communications, and electronic equipment, the Army was forced in FY 1995 to fund missile and associated equipment at less than 80 percent of its needs to stay within Army Operation and Maintenance funding constraints. To maintain the readiness of missiles and associated equipment at the same levels as airframes and aircraft

engines, combat vehicles, ships, and ground communications and electronic equipment, the Army should require that missiles and associated equipment also receive the same level of funding for depot-level requirements.

In its FY 1996 and 1997 allocation of the available depot maintenance funding, the Army continued to adhere to the 80-percent requirement in the Conference Report on the DoD Appropriation for FY 1995 even though the FY 1996 and 1997 Conference Reports did not contain the requirement. Army Chief of Staff personnel explained that even though the 80-percent requirement was not stated in the FY 1996 and 1997 Conference Reports, the Army understood from contacts with conference committees that the intent of the committees was that the 80-percent funding requirement was still in effect.

Maintaining Unit Readiness. The Office of the Army Chief of Staff was forced to consider Army unit readiness impacts when making funding decisions because of the limited funding for Army depot maintenance. For example, Army Chief of Staff representatives advised that in planning and allocating FY 1998 depot maintenance funds, only 27 percent of the depot maintenance needs of missiles and associated equipment could be funded because:

o only 58 percent of identified Army-wide depot maintenance needs were funded, and

o Congress required that the Army fund 80 percent of the identified needs of airframes and aircraft engines, combat vehicles, ships, ground communications, and electronic equipment.

That situation results in intense and repetitive competitions for the limited funds among all Army depot maintenance needs.

Funds to Correct Known System Deficiencies. Program managers did not budget sufficient funds for known missile system deficiencies. During our review, we identified two systems in which program managers identified deficiencies while the program management office managed the program. In both instances, the program management offices did not provide the Missile Command with funding to correct the system deficiencies. As a result, the Missile Command had to pursue budgeting and funding for the system deficiencies after the two programs transitioned from the program management offices to the Missile Command, which further exacerbated the funding shortfalls.

Avenger Missile System. On the initial Avenger missile system contract awarded in 1987, the Avenger Project Office accepted 325 Avenger systems without requiring the prime contractor to subsequently correct an operational performance deficiency with the forward-looking infrared system that had been identified during testing before full-scale production. As a result, the uncorrected forward-looking infrared system will operate less effectively when a radiation source is used nearby. Numerous radiation sources are on the typical battlefield. They include high power electrical lines, enemy jamming and friendly communications, radar, and other electrical equipment. The

radiation will clutter the forward-looking infrared system's target acquisition screen with interference. Therefore, the operating crews will have difficulty identifying an actual target, making the system less effective.

On October 1, 1995, the Avenger Project Office dissolved, and management of the Avenger program transitioned to the Missile Command. Before the transition, the Avenger Project Office was working with the contractor on acceptable design changes to correct the forward-looking infrared system. The contractor produced an upgraded design for the forward-looking infrared system, which the Avenger Project Office approved. However, by agreement with the contractor, correcting the existing units would be the responsibility of the Army. The Avenger Project Office was unable to provide the Missile Command any funds for correcting the forward-looking infrared system deficiencies, estimated to cost $14.2 million, when the Avenger transitioned to the Missile Command. Management at the Missile Command acknowledged the existence of the operational problems of the forward-looking infrared system and agreed to take corrective action on all known or suspected system deficiencies.

Tube-Launched, Optically-Tracked, Wire-Guided Missile System. The program office identified a shortcoming in the laser window coating on the optical sighting lens of the missile launcher in the mid 1980s, but did not implement corrective action until management of the program transitioned to the Missile Command in the second quarter of FY 1995. Without correction of the problem, an enemy laser beam focused through the optical sighting lens can blind the missile gunner. A laser beam focused through the optical sighting lens is 169 times more intense than an unfocused laser beam.

The program manager initiated a feasibility study to correct the problem in 1984, and a contract was issued in December 1985 for production of retrofit kits. Initial fielding of the retrofit kits to missile launchers was made in 1991 in support of Operation Desert Shield. The Missile Command estimated that $90,000 will be needed to fund the addition of protective coated optical sighting lenses to fielded missiles that transitioned to it in the second quarter of FY 1995 without retrofit kits installed.

Conclusion

To assist in meeting planned Army-wide staff cuts for FY 1998, the Army is planning to transition as many as 200 weapon systems to its 5 commodity commands. Although decisions have not yet been made as to how many and which missile systems will transition to the Missile Command, currently only about one missile system a year transitions to the Missile Command.

When missile systems were transitioned, the Army was not providing the Missile Command with sufficient Operation and Maintenance funds to sustain the readiness of the weapon systems that it manages in accordance with the Army prioritization guidance for sustainment of fielded equipment. The

funding problem will increase when Army missile program management offices begin transitioning more missile programs to the Missile Command in FY 1998 to reduce the size of the Army acquisition work force.

We understand the inability of the Army to fund all depot-level maintenance requirements and the need to allocate diminishing resources among the competing requirements. However, a dichotomy exists between the Army funding of missiles and associated equipment and that of airframes, aircraft engines, combat vehicles, ships, ground communications, and electronic equipment. The dichotomy results in a lesser allocation of funding to missiles. The funding problems will be exacerbated by the large increase in programs to transition from program management offices to the commodity commands planned for FY 1998.

Recommendations, Management Comments, and Audit Response

A.1. We recommend that the Assistant Secretary of the Army (Financial Management and Comptroller) and the Army Chief of Staff assess and reallocate:

a. Sufficient Operation and Maintenance funds to the Army Missile Command to sustain missile systems and supporting equipment to at least the minimum levels required in Army prioritization guidance for the sustainment of fielded equipment.

b. Stable depot maintenance funding for missile systems and additions to depot maintenance funding for each program transitioned to the Army Missile Command that is in danger of impaired unit readiness for Army Force Package 2 units.

A.2. We recommend that the Army Chief of Staff require that missiles and supporting equipment receive the same percent of funding for depot-level requirements as airframes and aircraft engines, combat vehicles, ships, ground communications, and electronic equipment.

Management Comments. The Army agreed with the three recommendations, stating that by October 1997 the office of the Deputy Chief of Staff for Logistics will review the situation described in the finding and take any required corrective actions to Operation and Maintenance funds for missiles during the Program Objective Memorandum FY 1999 to FY 2003 build. The Army also provided suggested revisions and clarifying comments on the finding.

Audit Response. We commend the Army for its responsive actions. We have made revisions to the finding as appropriate based on the clarifying comments of the Army, and we need no further comments. A complete discussion of the Army clarifying comments to the report is in Part II. The full text of the Army comments is in Part III.

Finding B. Credits for Depot-Level Repairable Returns

Army missile users were not receiving credits for all creditable depot-level missile repairable returns to Army wholesale supply organizations in that the wholesale supply organization would:

o not grant credit for items received 120 days after shipment,

o grant credit based on the lowest condition code when more than one item was returned on the same shipment status report, and

o not grant credit when the national stock number of items received did not match the user report of available excess.

The users did not receive the credits because the Army did not adequately train user personnel in the correct procedures for preparing and processing the required paperwork to transfer missile items to wholesale supply organizations.

Based on data in the materiel returns data base, we estimate that users lost from $1.1 million to $63.9 million in credits in FY 1996, depending on whether the items are in serviceable or unserviceable condition, thus increasing the missile Operation and Maintenance funding problems identified in Finding A.

Item Return Policy and Guidance

DoD Regulation 4140.1-R, "DoD Materiel Management Regulation," January 1993, establishes policy and guidance for item accountability, control, and stewardship. It states that the integrated materiel manager is responsible for initiating discrepancy research and taking the actions necessary to ensure that the physical on-hand quantity and the total item property record quantity are in agreement for all DoD materiel.

Army Regulation 725-50, "Requisitioning, Receipt, and Issue System," November 15, 1995, governs the logistics process for wholesale, retail, and user organizations in the Army. Wholesale supply organizations are inventory control points that buy supplies for the Army and sell them to retail supply organizations, which are at the installation level. Retail supply organizations then sell supplies to the ultimate users. Chapter 7 of Army Regulation 725-50 addresses the Materiel Return Program.

The amount of credit an Army unit receives depends on whether the missile item is in a serviceable or unserviceable condition and whether the retail stock fund or wholesale stock fund needs the item. Users receive a credit equal to the standard unit price for a serviceable item if the retail stock fund needs the item.

For an unserviceable item, the user receives a credit equal to the standard unit price less the repair cost if the retail stock fund needs the item. For serviceable and unserviceable items that the retail stock fund does not need, the user receives 45 to 55 percent of the standard unit price.

The amount of credit that the wholesale stock fund gives the retail stock fund for items not needed at the retail level or requiring repair at the wholesale level depends on whether the wholesale system needs the item. If the wholesale system needs a serviceable item, the retail stock fund receives a credit equal to the standard unit price less a surcharge. If the wholesale system does not need a serviceable item, the retail stock fund receives no credit and will either return the item to the wholesale inventory or send it to disposal.

If the wholesale system needs an unserviceable item, the retail stock fund will receive a credit equal to 50 to 60 percent of the standard unit price. If the item is not needed at the wholesale system, the retail stock fund receives no credit and will dispose of it.

Timeliness of Materiel Returned

The wholesale supply organizations did not maintain user turn-in records for missile items in transit from retail supply organizations to wholesale supply organizations for more than 120 days. We queried the wholesale supply organization's materiel returns data base of the Army Materiel Command's Logistics Support Activity for items that were creditable returns. The materiel receipt status report identifies items that the wholesale supply organizations did not receive within 120 days of shipment. Depending on whether the items were in serviceable or unserviceable condition on receipt, the wholesale supply organization did not give Army users credits ranging from $33,803 to $145,633 for items returned in FY 1996.

Condition Codes

The wholesale supply organization granted users credit based on the lowest item condition code when more than one item was returned on the same shipment status report. Condition codes describe whether items are serviceable, in need of repairs, or unusable. Items assigned condition codes of "A," "B," "C," or "D" are serviceable. Items assigned condition codes "E," "F," or "G" are unserviceable, but repairable. Items assigned condition code of "H" are not repairable to serviceable condition. To determine the impact of the wholesale supply organization's practice, we queried the materiel returns data base for items that were creditable returns. The materiel status report identifies items for which the wholesale supply organizations allowed no credit or reduced credit because the condition of the item received was less than that authorized for return. From the report, we identified depot-level repairable items for which

Army users did not receive credits. Depending on whether the items were in serviceable or unserviceable condition on receipt, Army users were not given credits ranging from $345,577 to $2,868,430 for items returned in FY 1996.

National Stock Number Discrepancies

The wholesale supply organization did not grant users credit when the national stock number (stock number) reported for the credit did not match the stock number for the item returned. The stock number will not match if the wholesale system substituted a similar part when a maintenance area requested a part. Supply users also stated that even the slightest item change can cause an item to have a different stock number. For example, engines returned with a container and engines returned without a container have different stock numbers. To determine the impact of the wholesale supply organization's practice, we queried the materiel returns data base for items that were creditable returns. The materiel receipt status report identified items for which the wholesale supply organization allowed no credit because the item received was other than that stock number authorized for return. From the report, we identified depot-level repairable items for which Army users were not refunded credit. Depending on whether the items were in serviceable or unserviceable condition on receipt, the Army did not give users credit ranging from $683,242 to $60,878,976 for items returned in FY 1996.

Training

Lack of training was the reason that users did not receive credits for depot-level repairable missile items returned to wholesale and retail supply organizations. The personnel needed training on preparing and submitting required documents. Personnel not sending or not properly completing the shipping documents resulted in delayed shipment of items to the wholesale organization. The wholesale organization also reported that the incorrect completion of return and shipping documents, in conjunction with not sending the correct stock number, quantity, or condition codes, was the primary reason for user credit delays or credits not received. Proper training will enable users to efficiently manage the materiel returns program.

Another contributing factor to the incorrect preparation of documents required to obtain credits and the untimely shipment of depot-level repairable items is the turnover of personnel responsible for those tasks. The technician and shop positions involved are usually staffed by military personnel on rotational assignments. The combination of a user-unfriendly system for obtaining credits and the turnover of personnel involved with the system, especially military personnel, requires a higher and continued training effort by the Army.

To help resolve the training problem, the Army Reserve hired a contractor to provide training to managers and technicians responsible for the materiel returns program. The contractor trained four regional support commands on how to better manage and execute their repairable management responsibilities. The Army Reserve plans to complete the training for the remaining regional support commands by June 1998. The Army Chief of Staff should establish a similar training program for its elements.

Credits For Items

Table 3 shows by category the credits lost in FY 1996.

Table 3. Credits Lost in FY 1996

	Credits for Items	
Category	Serviceable	Unserviceable
Timeliness	$ 33,803	$ 145,633
Condition Code	345,577	2,868,430
Stock Number	683,242	60,878,976
Total	**$1,062,622**	**$63,893,039**

Recommendation, Management Comments, and Audit Response

B. We recommend that the Army Chief of Staff establish a training program for users on the proper preparation of depot-level repairable turn-in documents and the timely shipment of items to the wholesale supply organization to obtain credits for returned items.

Management Comments. The Army agreed with the finding and advised that the office of the Deputy Chief of Staff for Logistics and the Commander of the Training and Doctrine Command would monitor the training of soldiers to prepare and submit depot-level repairable turn-in documents to the wholesale organizations on a continuing basis and inform the Army Chief of Staff of any further problems due to the situation described in the finding. The Army also stated that the office of the Deputy Chief of Staff for Logistics will recommend that compliance with the materiel returns program be added as a special interest item for the command logistics review team to look at as part of its review during FY 1998.

Audit Response. The Army comments are responsive to the intent of the recommendation. We commend the Army for its responsive actions. No further comments are required.

Part II - Additional Information

Appendix A. Audit Process

Scope

We conducted this program audit from August 19, 1996, through March 20, 1997, and we reviewed data dated from December 1993 through February 1997. To accomplish the objective, we examined transition plans for the following eight missile systems:

- o the Avenger missile system;
- o the Tube-Launched, Optically-Tracked, Wire-Guided Missile system;
- o the Multiple Launch Rocket System;
- o the Stinger missile system;
- o the Light and Special Division Interim Sensor system;
- o the Hellfire missile system;
- o the Patriot missile system; and
- o the Hawk missile system.

In addition, we reviewed and discussed issues relating to transition management with Army program, technical, and contracting officials.

Use of Computer-Processed Data. We performed limited tests on the reliability of computer-processed data that the Army Materiel Command Logistics Support Activity located at Redstone Arsenal, Alabama, provided to us. We queried the materiel returns data base to identify items returned to the wholesale supply system for which credits were not given to the organization that returned them. The lost credits cited in Finding B are based on information provided to us by the Logistics Support Activity and were not audited. To the extent that we reviewed the computer-processed data, we concluded that they were sufficiently reliable to be used in meeting our audit objective.

Methodology

We conducted this program audit in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD. Accordingly, we included tests of management controls considered necessary.

Contacts During the Audit. We visited or contacted individuals and organizations within the DoD. Further details are available on request.

Management Control Program

DoD Directive 5010.38, "Management Control (MC) Program," August 26, 1996, requires DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of Review of the Management Control Program. We limited our review because of relevant coverage in Inspector General, DoD, Report No. 96-028, "Implementation of the DoD Management Control Program for Major Defense Acquisition Programs," November 28, 1995. The report discusses the effectiveness of the management control program that the Defense Acquisition Executive and the Component Acquisition Executives used for major Defense acquisition programs. The report concludes that the acquisition community had not effectively integrated DoD Management Control Program requirements into its management assessment and reporting processes. As a result of the report recommendations, the Under Secretary of Defense for Acquisition and Technology integrated DoD Directive 5010.38 requirements into the March 15, 1996, revisions to DoD Directive 5000.1, "Defense Acquisition," and DoD Regulation 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," March 15, 1996. Acquisition managers are now to use program cost, schedule, and performance parameters as control objectives to carry out the DoD Directive 5010.38 requirements. The managers are to identify material weaknesses through deviations from approved acquisition program baselines and exit criteria in the "Defense Acquisition Executive Summary" report.

Consequently, we limited our review to the adequacy of Program Executive Officer for Tactical Missiles and Missile Command management controls over transition management. Specifically, we reviewed those management controls over planning, authorizing, implementing, and documenting the transition of weapon systems.

Adequacy of Management Controls. Program Executive Officer for Tactical Missiles and Missile Command management controls over transition management were adequate in that we identified no material management control weaknesses applicable to our primary audit objective. We did not assess the management self-evaluations of the controls because the controls were adequate.

Prior Audit Coverage

Inspector General, DoD, Report No. 96-221, "The Avenger Forward-Looking Infra-Red System," September 16, 1996, states that from November 1, 1988, through May 21, 1992, the Avenger Project Office accepted 325 deficient Avenger systems without requiring the prime contractor to later correct critical forward-looking infrared system operational performance deficiencies or to provide for an equitable contract cost reduction or other consideration for the Government waiving the forward-looking infrared system performance requirement. As a result, the uncorrected forward-looking infrared system will operate ineffectively when a radiation source is used nearby. On October 1, 1995, the Avenger Project Office was dissolved, and management of the Avenger program transitioned to the Weapon System Management Directorate of the Army Missile Command.

To correct the problem, the Weapon System Management Directorate proposed that the Directorate compile a history of electromagnetic interference problems; list and prioritize corrective actions; request consideration from the contractor to implement the appropriate corrective actions; if unable to obtain consideration from the contractor, pursue budgeting and funding for the corrective actions; and resolve existing hardware problems either contractually or by field repairs.

The report recommended and the Commander, Army Missile Command, agreed to develop time-phased milestones to facilitate completion of the plan of action to correct the Avenger Forward-Looking Infra-Red system's operational performance anomalies for systems already accepted as well as systems under contract.

Appendix B. Descriptive Information on Selected Missile Programs

Avenger Missile System. The Avenger missile system is a lightweight, highly mobile, transportable surface-to-air missile and 0.50 caliber machine gun system. The system is operated by a two-person crew. The crew defends against helicopters and fixed-wing aircraft flying at low altitude, in day or night operations, and in clear or adverse weather. The Avenger is expected to encounter possible aircraft attack and be subjected to nuclear, biological, and chemical threats. The system is mounted on a high-mobility multipurpose wheeled vehicle and has an operator's position with controls and displays, fire control electronics, and a standard vehicle-mounted launcher to support and launch Stinger missiles. The Avenger crew acquires the target by direct vision using the optical sight or by using a forward-looking infrared system for night and poor weather operation. In total, the Army has contracted for 911 units and has an unfunded contract option for another 93 units. The Army is acquiring 237 of the 1,004 Avenger units for the Marine Corps. Depending on whether the funding for the last year of the multiyear contract is appropriated, the Army will acquire from 674 to 767 Avenger units for its own use. The total estimated life-cycle cost of the program is about $1 billion in then-year dollars.

Tube-Launched, Optically-Tracked, Wire-Guided Missile System. The missile is the primary anti-tank weapon of the Army. The missile is tube-launched from the ground, vehicles, and helicopters. The missile provides a heavy anti-tank assault capability for the infantry, air-mobile, and mechanized infantry battalions. Hughes Electronics Corporation and Hughes Missile Systems Company in Tucson, Arizona, developed and produced the missile. Hughes began producing the missile in 1968 and will have produced about 596,000 units by the end of 1998. The Army plans to procure about 3,500 missiles by the end of FY 1997 at a cost of about $121.9 million.

Multiple Launch Rocket System. The Multiple Launch Rocket System is designed to supplement cannon weapons by the delivery of a large volume of firepower in a short time against critical, time-sensitive targets. The Multiple Launch Rocket System consists of a M270 launcher, two disposable pods containing six rockets each, a fire control system, and an Azimuth position reference unit. A three-person crew consisting of a driver, gunner, and section chief operate the Multiple Launch Rocket System. In 1980, Loral Vought Systems was selected as the prime contractor for the Multiple Launch Rocket System and was awarded a full-scale development contract. The first Multiple Launch Rocket System units were delivered to the Army in 1983. Over 800 units equipped with about 500,000 tactical rockets will be in service with the Army, including National Guard units, by 1996. The average unit cost of a complete Multiple Launch Rocket System is about $3.7 million.

Stinger Missile System. The Stinger missile is a shoulder-launched, infrared or infrared and ultraviolet homing anti-aircraft missile. The Stinger is part of the Man-Portable Air Defense System of the Army and replaces the Redeye missile

for defense against low-flying aircraft. General Dynamics was the prime contractor for the Stinger until May 1992, when Hughes Aircraft Company acquired General Dynamics' missile division. The first units were produced in 1979, and initial operating capability was achieved in 1981. The Stinger has various applications. Air-to-air Stinger missiles are fired from launch rails on the OH-58 helicopter and other helicopters. Avenger pedestal-mounted Stinger missiles are fired from a pedestal mount on the M998 vehicle. A Stinger launcher containing six missiles will also be installed on the Bradley Fighting Vehicle. The Army plans to procure a total of about 40,000 units. The Navy, the Air Force, and the Marine Corps plan to acquire a total of about 1,110 units, 216 units, and 11,800 units, respectively.

Light and Special Division Interim Sensor System. The Light and Special Division Interim Sensor is a portable battlefield radar that provides low-altitude airspace surveillance coverage for friendly and hostile aircraft within a 20-kilometer radius and a 3-kilometer altitude. The Light and Special Division Interim Sensor replaces the Forward-Area Alert Radar as a means to provide defense capabilities for light infantry divisions. Lockheed Sanders was awarded a contract to produce the Light and Special Division Interim Sensor in November 1990. The contractor has produced 88 units for United States and International customers. The unit cost of the radar is between $40,000 and $50,000, depending on the number of units contracted.

Hellfire Missile System. The Hellfire missile program is composed of two systems: the Laser Hellfire missile system and the Longbow Hellfire missile system. Both missiles share common components and are air-to-ground missiles designed to defeat individual hardpoint targets and minimize exposure of the delivery vehicle to enemy fire. The unit cost of the missile systems ranges from about $53,000 to $200,000.

The Laser Hellfire Missile. The Laser Hellfire missile is a laser-guided anti-armor missile that homes on a laser point that can be projected to ground observers, the launching aircraft, or other aircraft. The Laser Hellfire missile is capable of engaging single or multiple targets directly or indirectly and of firing single, rapid, or ripple rounds. Key contractors involved in the Laser Hellfire missile system are Lockheed Martin and Boeing North American.

The Longbow Hellfire Missile. The Longbow Hellfire missile is a fire-and-forget missile that greatly enhances the survivability of the host helicopter. The Longbow Hellfire missile uses inertial radar-aided guidance to provide a lock-on-before-launch or a lock-on-after-launch capability. The Longbow Hellfire missile is produced by a joint venture of Lockheed Martin and Northrop Grumman.

Patriot Missile System. The Patriot missile is a land mobile, medium-to-high altitude, surface-to-air guided missile developed for defense against aircraft and tactical ballistic missiles. The combat element of the Patriot is the fire unit, which consists of a radar set, an engagement control station, an equipment powerplant, an antenna mast group, and eight remotely located launchers. The Patriot has several features not available in previous air defense systems. The features include a fast-reaction capability, high firepower, the ability to track

50 targets simultaneously with a maximum range of 37 nautical miles, and the ability to operate in severe electronic countermeasures. The Patriot program began in 1963 as a replacement for the Nike and Hercules missiles. As of the end of 1996, the prime contractor has produced about 11,100 Patriot missiles of all types. The missile's unit cost varies from $500,000 to $1,000,000, depending on the quantities purchased.

Hawk Missile System. The Hawk missile is a supersonic, medium-range, surface-to-air missile. The Hawk was developed and produced by Raytheon Company in West Andover, Massachusetts. The initial Hawk production began in 1957. Several upgrades and modifications have taken place since then. By the end of 1996, the Raytheon Company had delivered about 25,300 Hawk missiles. The unit cost of Hawk missile is about $155,000.

Appendix C. Army Comments and Audit Response

The Office of the Army Deputy Chief of Staff for Operations and Plans and the Program Executive Office for Tactical Missiles provided specific comments on Findings A and B and on Appendix B. Below we discuss each comment and provide our response.

Deputy Chief of Staff for Operations and Plans Comments

Finding A Comment. Army Headquarters had not documented and validated an unresourced requirement for Avenger forward-looking infrared systems.

Audit Response. In response to Inspector General, DoD, Report No. 96-221, "The Avenger Forward-Looking Infra-Red System," September 1996, the Assistant Secretary of the Army (Research, Development and Acquisition) advised that the Army Missile Command would submit to Army Headquarters the unfunded requirement for the Avenger forward-looking infrared systems.

Finding A Comment. No significant risk of blindness exists with the Tube-Launched, Optically-Tracked, Wire-Guided Missile System. During Operation Desert Shield/Desert Storm in 1991, all Active Component missile launchers were retrofitted to correct the laser window coating problem described in the audit report. The Office also stated that Army Headquarters had not documented and validated an unresourced requirement.

Audit Response. We do not dispute the comment that the Army retrofitted the missile launchers used in Operation Desert Shield/Desert Storm to correct the problem. However, the information that we obtained during the audit showed that additional missile launchers remain to be retrofitted. Army Headquarters does not have the funds to resource the remaining missile launcher retrofit kits.

Finding A Comment. No misallocation of resources exists. The Army would like to fund missiles at 80 percent of requirements; however, sufficient funding during the time of the audit report was not available and could not be accomplished without additions to the Total Obligational Authority of the Army.

Audit Response. We agree that Army problems in funding missile depot-level maintenance requirements were because of limitations in funding beyond the control of the Army, and we recognized that in the report.

Finding B Comment. The Army has an existing training program to manage returns. Army Regulation 725-50, Chapter 7, requires that soldiers who will be preparing forms for returns receive training to manage returns during their

military careers, including the Advanced Individual Training Course, the Basic Noncommissioned Officers Course, and the Advanced Noncommissioned Officers Course.

Audit Response. We agree that the Army has training programs that include the management of returns. However, we continue to believe that users need specific training regarding the processing of documents to receive credits for depot-level repairable missile items returned to wholesale and retail supply organizations. User personnel need specific training on preparing and submitting required documents.

Program Executive Office for Tactical Missiles Comments

Finding A Comment. Shortly after formation of the Avenger Project Office in April 1992, the Avenger Project Office required Boeing to take immediate action to stop receipt of fire units until a corrective action plan was in place to resolve the forward-looking infrared system technical issues. Up to that point, Boeing had not made any significant attempt to correct the deficiencies. It further stated that the contracting officer, the Avenger Project Office, and Boeing exchanged numerous letters and made agreements based on the legal rights of the Army in the matter. As a result, Boeing developed the required modifications to the forward-looking infrared system that required no cost to the Government. The modifications specified that the design would be cut into the existing Boeing contract with the Army and that the retrofit of existing fire units would be the responsibility of the Government. Boeing submitted the upgraded forward-looking infrared system design modifications to the Army for approval. The Army disapproved the proposed contract design modifications. Later, the Army modified the Boeing contract resolving the forward-looking infrared system design issue and absolved Boeing from responsibility for correcting the system design problem.

Audit Response. Although the Army contractually resolved the Avenger forward-looking infrared system design issue, the Army had not taken action to resolve the operational design problem of the forward-looking infrared system before we issued Report No. 96-221, "The Avenger Forward-Looking Infra-Red System," September 16, 1996.

Finding A Comment. The Tube-Launched, Optically-Tracked, Wire-Guided Missile System Project Office and the Army Missile Command took positive action to correct the laser threat problem in the mid-1980s.

Audit Response. We agree that action to correct the problem was initiated in the mid-1980s, but the Army did not take action to correct the problem for all Tube-Launched, Optically-Tracked, Wire-Guided Missile Systems.

Finding A Comment. The Tube-Launched, Optically-Tracked, Wire-Guided Missile System Project Office believes that the January 1996 optical protection

technical data package mentioned in the draft report referred to an update to the earlier technical data package to reflect later optical protection requirements that Picatinny Arsenal imposed.

Audit Response. The draft report that we issued did not mention the January 1996 technical data package that Picatinny Arsenal issued.

Finding A Comment. The Tube-Launched, Optically-Tracked, Wire-Guided Missile System Project Office did not know the origin of the $90,000 estimate needed to procure optically protected lenses and windows to continue the eye protection program.

Audit Response. The Army Missile Command provided the $90,000 estimate needed to procure optically protected lenses and windows to continue the eye protection program.

Finding A Comment. The ground Tube-Launched, Optically-Tracked, Wire-Guided Missile System launcher, not the Tube-Launched, Optically-Tracked, Wire-Guided Missile System missile, has a sighting lens.

Audit Response. The draft report so stated.

Appendix B Comment. The Program Executive Office for Tactical Missiles recommended that any mention of the Hellfire missile system be deleted from the report because the Army does not plan to transition the Hellfire missile system into the sustainment phase until FY 2004.

Audit Response. We included in the scope of the audit missile programs that had not yet transitioned to the sustainment phase to determine the adequacy of Army missile transitioning plans.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition and Technology
  Deputy Under Secretary of Defense for Logistics
  Director, Defense Logistics Studies Information Exchange
Under Secretary of Defense (Comptroller)
  Deputy Chief Financial Officer
  Deputy Comptroller (Program and Budget)
  Director, Program Analysis and Evaluation
Assistant Secretary of Defense (Public Affairs)
Deputy Under Secretary of Defense (Industrial Affairs and Installations)
Deputy Under Secretary of Defense (Readiness)
Deputy Assistant Secretary of Defense (Materiel and Facilities)

Joint Staff

Director, Joint Staff

Department of the Army

Chief of Staff
Assistant Secretary of the Army (Financial Management and Comptroller)
Assistant Secretary of the Army (Research, Development and Acquisition)
  Program Executive Officer, Tactical Missiles
Commander, Army Materiel Command
  Commander, Army Missile Command
    Director, Weapon System Management Directorate
Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Financial Management and Comptroller)
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Logistics Agency
  Director, Defense Contract Management Command
Director, National Security Agency
  Inspector General, National Security Agency
Inspector General, Defense Intelligence Agency

Non-Defense Organizations and Individuals

Office of Management and Budget
Technical Information Center, National Security and International Affairs Division, General Accounting Office

Chairman and ranking minority member of the following congressional committees and subcommittees:

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on National Security, Committee on Appropriations
House Committee on Government Reform and Oversight
House Subcommittee on Government Management, Information, and Technology, Committee on Government Reform and Oversight
House Subcommittee on National Security, International Affairs, and Criminal Justice, Committee on Government Reform and Oversight
House Committee on National Security
House Subcommittee on Military Readiness, Committee on National Security

Part III - Management Comments

Department of the Army Comments

Final Report Reference

DEPARTMENT OF THE ARMY
OFFICE OF THE DEPUTY CHIEF OF STAFF FOR OPERATIONS AND PLANS
400 ARMY PENTAGON
WASHINGTON DC 20310-0400

REPLY TO ATTENTION OF

DAMO-ZR

27 JUN 1997

MEMORANDUM THRU ~~DIRECTOR OF THE ARMY STAFF~~, 27 JUN 1997
~~ASSISTANT SECRETARY OF THE ARMY~~ FOR FINANCIAL MANAGEMENT AND COMPTROLLER

FOR THE DEPARTMENT OF DEFENSE INSPECTOR GENERAL, AUDITING,
WASHINGTON, DC 22202

SUBJECT: Audit Report on Transition of Army Missile Acquisition Programs From Program Management Offices to Commodity Commands (Project No. 6AE-5052)

1. This memorandum provides our concurrence, with comment, with findings concerning subject draft audit report.

Finding A. We agree with the need to provide sufficient funding to maintain the readiness of equipment as prescribed by Army guidance.

Revised

Comment. The statement on page i of the Executive Summary "...for Force Package 2 units, portions of which are expected to deploy within 24 hours (Finding A)." is not completely accurate. In general, Force Package 2 units are not required to deploy within 24 hours.

Revised

Comment. The statement on page 4 "The Army had insufficient funding to bring missiles and related equipment for other units, portions of which are also expected to deploy within 24 hours, or units expected to deploy within 30 to 90 days, up to the minimum levels of readiness." is not completely accurate. We resource units in accordance with their deployment timelines. Furthermore, a review of readiness reports does not show significant readiness problems for missile systems with the exception of Patriot systems. The Patriot system problems are attributable to Personnel Tempo (PERSTEMPO) in support of contingency operations rather than shortfalls in commodity command maintenance support.

Revised

Comment. The statement on page 5 "...but some of the units are also expected to deploy within 24 hours." is not completely accurate. In general, Force Package 2 units are not required to deploy within 24 hours.

Final Report Reference

Page 5

DAMO-ZR
SUBJECT: Audit Report on Transition of Army Missile Acquisition Programs From Program Management Offices to Commodity Commands (Project No. 6AE-5052)

Comment. The last paragraph of the section "Department of the Army Master Priority List" on page 6 does not correlate with Army guidance. Force Packages 1 through 3 are resourced to maintain equipment readiness at R-1 levels which equates (except for aviation systems) to the 90% or above level of equipment readiness.

Comment. Informal discussions with Congressional staffers indicates that the restricting "80 percent requirement" was mistakenly left out of the Conference Reports language and that it should be added back in FY 98.

Comment. No unresourced requirement for Avenger forward-looking infrared system has been documented and validated at the Headquarters.

Comment. No significant risk to blindness exists with the TOW missiles and the TOW is operable. During Operation Desert Shield/Desert Storm in 1991, all Active Component TOWs were retrofitted to correct the laser window coating problem described in the audit report. No unresourced requirement has been documented and validated at the Headquarters.

Comment. No misallocation of resources exists. The Army would like to fund missiles at 80% of requirements, however, sufficient funding during the time period of the audit report was not available and could not be accomplished without additions to Army's Total Obligational Authority.

Comment. ODCLSOG monitors equipment readiness status monthly and advises the Chief of Staff, Army on readiness of numerous key systems. ODCSLOG will monitor the equipment readiness of Army forces on a continuing basis and inform the Chief of Staff, Army of any changes in readiness due to the situation described in the audit report.

Recommendation A.1.a. We will maintain the minimum levels for the sustainment of fielded equipment within the context of overall Army requirements and priorities and considering Army's affordability posture and assessed risks. ODCSLOG will review the situation described in the audit report and take any required feasible corrective actions to operation and maintenance funds for the Army Missile Command during the Program Objective Memorandum (POM) FY 99-03 build. Estimated time of completion is October 1997.

2

DAMO-ZR
SUBJECT: Audit Report on Transition of Army Missile Acquisition Programs From Program Management Offices to Commodity Commands (Project No. 6AE-5052)

Recommendation A.1.b. We will maintain stable depot maintenance funding for missile systems transitioned to Army Missile Command within the context of overall Army requirements and priorities and considering Army's affordability posture and assessed risks. Readiness levels for Force Package 2 units will not be impaired. OASA(RDA), ODCSOPS and ODCSLOG will review the situation described in the audit report and take any required feasible corrective actions to operation and maintenance funds for the Army Missile Command during the Program Objective Memorandum (POM) FY 99-03 build. Estimated time of completion is October 1997.

Recommendation A.2. ODCSLOG will review the situation described in the audit report and take any required feasible corrective actions to operation and maintenance funds for missiles and supporting equipment during the Program Objective Memorandum (POM) FY 99-03 build. Estimated time of completion is October 1997.

Finding B. We agree with the need to ensure users receive credit for depot-level repairable items returned to the supply system. Inequitable reimbursement for turn-in items restricts the commander's flexibility to maintain trained and ready units and quality of life. However, improper submission of materiel return documents has not been cited as a major reason for credit problems within the logistics community.

Comment. We have an existing training program to manage returns. Detailed instructions are provided in AR 725-50, Chapter 7. Each soldier who will be preparing forms for returns receives considerable training during their military career including Advanced Individual Training, Basic Noncommissioned Officers Course and Advanced Noncommissioned Officers Course.

Comment. ODCSLOG and TRADOC will monitor the training of soldiers to prepare forms on a continuing basis and inform the Chief of Staff, Army of any further problems in return credits due to the situation described in the audit report.

Recommendation B. The situations cited in the audit are examples of non-compliance with existing regulations and the inventory control points should not grant credit. The ODCSLOG will recommend that compliance with the materiel returns program be added as a special interest item for our command logistics review team (CLRT). The CLRT performs compliance reviews for the ODCSLOG.

3

DAMO-ZR
SUBJECT: Audit Report on Transition of Army Missile Acquisition Programs From Program Management Offices to Commodity Commands (Project No. 6AE-5052)

2. We are enclosing additional comments/changes for accuracy and clarification which were written by the Program Executive Office, Tactical Missiles. We agree with these comments and are forwarding them to you to improve your audit report.

3. Point of Contact for this action is Mr. Creasy, Room 3B513, 697-3515.

Encl

STEPHEN C. MAIN
Colonel, GS
Chief, Resource Analysis
and Integration Office

4

DEPARTMENT OF THE ARMY
PROGRAM EXECUTIVE OFFICE, TACTICAL MISSILES
REDSTONE ARSENAL, ALABAMA 35898-8000

REPLY TO ATTENTION OF

SFAE-MSL

23 June 1997

MEMORANDUM For U.S Army Audit Agency
SAAG-PMO-E
Pentagon Branch, Room 1C711
113 Army Pentagon
Washington, D.C. 20310-0113

SUBJECT: DODIG Draft Report, Transitioning of Army Missile Acquisition Programs from Program Management offices to Commodity Commands (Project No 6AE-5052)

1. The Program Executive Office Tactical Missile comments to the subject draft report are enclosed.

2. The POC for this action is Mr. David Prince at DSN 788-6945.

Billy R Bentley

BILLY R. BENTLEY
Deputy, Program Support
Program Executive Office
Tactical Missiles

Encl

Final Report Reference

Program Executive Office-Tactical Missiles' Comments

DODIG Draft Report, Transition of Army Missile Acquisition Programs from Program Management Offices to Commodity Commands (Project No 6AE-0052.00)

The following comments/changes are provided for accuracy and clarification:

1. **Reference**: Finding A - Avenger, Page 9

Page 8

"On the initial Avenger system contract awarded in 1987, the Avenger Project Office accepted 325 Avenger systems without requiring the prime contractor to subsequently correct an operational performance deficiency with the FLIR system that had been identified during testing prior to full-scale production. As a result, the uncorrected FLIR system will operate less effectively when a radiation source is used nearby. The FLIR system's target acquisition screen will be cluttered with interference. Therefore, the operating crews have difficulty identifying an actual target, making the system less effective."

Response: Shortly after formation of the Avenger Project Office, specifically 3 April 1992, the Project Office required Boeing to take immediate action to stop DD250 of Fire Units until a corrective action plan to resolve the FLIR technical issues was in place or until otherwise directed by the government. Up to that point there had been numerous discussions in regards to FLIR technical issues and Boeing had not made any significant attempt to correct the deficiencies. DD250 was stopped and technical/contractual discussions began.. Numerous letters and discussions between the contracting officer, Avenger PMO, and Boeing were exchanged along with agreements based on the Army's legal rights in this matter. Boeing developed the required modifications to the FLIR at no cost to the government. The design would be cut into the existing contract with retrofit of existing units the responsibility of the government. This culminated with the submittal of an upgraded FLIR design. The design was submitted to the government but as disapproved. Subsequent to all this, the Boeing contract was modified by P00067 of contract

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92-C-0023, which also affected contract 86-C-A007. This modification settled the issue of the FLIR.

2. **Reference**: Finding A - Tube-Launched, Optically-Tracked, Wire-Guided Missile System, Page 9-10

Response: (1) AMC/LABCOM directed TOW Project Office in the mid 1980s to incorporate laser optical protection specification developed by ARDEC/Picatinny. TOW Project Office directed Hughes to document Picatinny requirements in optical sight technical data package for subsequent procurement of retrofit kits. Retrofit kit contract issued December 1985 to Pacific Optical for production of modification kits. Initial fielding was early 1991 in support of Operation Desert Shield. TOW Weapon System was the first weapon system in Southeast Asia with optical protection.

(2) CCAWS/TOW Project Office takes exception with findings and statements in the report issued by DODIG. Issue one: TOW Project was not aware of any laser threat until the mid 1980s. The TOW Project Office/MICOM took positive timely action to correct the problem at that time. Issue two: CCAWS/TOW Project Office believes the January 1996 optical protection technical data package mentioned, refers to an update to the earlier TDP to reflect later optical protection requirements imposed by Picatinny, and to identify a qualified source for the TDP. Issue three: CCAWS Project Office cannot address the $90K estimate needed to procure OP lenses/windows to continue the eye protection program. Issue four: The Ground TOW launcher, not the TOW missile, has a sighting lens.

Page 19

3. **Reference**: Multiple Launch Rocket System, Page 21, Paragraph 3, Appendix B.

Revised

Response: Change 700,000 tactical rockets to read "approximately 500,000 tactical rockets." Change the last sentence of paragraph to read " As reflected in the Selected Acquisition Report (SAR), dated 31 Dec 95, the average unit procurement cost for a complete Multiple Launcher is $3.7 million.

Page 20

4. **Reference:** Hellfire Missile System, Page 22, Appendix B.

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Page 20

Page 20

Response: Recommend that any mention of HELLFIRE be deleted from this report as current plans do not call for transition until FY 04. Further, the HELLFIRE missile system is mentioned only on Page 22, Appendix B, of subject report entitled "Descriptive Information on Selected Missile Programs." Should the preceding recommendation not be acceptable, recommend the following paragraph replace the one on Page 22, Appendix B, of subject report (description of the HELLFIRE Missile System) as the current report has some inconsistencies:

The HELLFIRE Missile Systems Program is comprised of two missile systems: The Laser HELLFIRE and the Longbow HELLFIRE. Both missiles share a common bus. Laser HELLFIRE is an air-to-ground missile system designed to defeat individual hardpoint targets and minimize exposure of the delivery vehicle to enemy fire. Laser HELLFIRE is a laser guided anti-armor missile which homes on a laser point that can be projected to ground observers, the launching aircraft, or other aircraft. Laser HELLFIRE is capable of engaging single or multiple targets directly on indirectly and to fire single, rapid, or ripple rounds. Key contractors involved in the Laser HELLFIRE missile program are Lockheed Martin and Boeing North American. Longbow HELLFIRE is an air-to-ground missile system designed to defeat individual hardpoint targets. The Longbow HELLFIRE is a fire-and-forget missile which greatly enhances the survivability of the host helicopter. The Longbow HELLFIRE missile utilizes inertial radar-aided guidance to provide a lock-on-before-launch or a lock-on-after-launch capability. The Longbow HELLFIRE missile is produced by a joint venture of Lockheed Martin and Northrop Grumman. The unit cost of the missile systems discussed above ranges from approximately $53K-$200K.

Audit Team Members

This report was prepared by the Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD.

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